

Taxonomic Considerations in Organizational Development, Assessment and Process Change

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ABSTRACT

Evaluating the impact of organizational interventions and change requires that systematic and reliable information be available at multiple levels of analysis. However, most organizations intervene and initiate change at one level (e.g., the individual or workgroup in a shop) but measure success in terms of effectiveness and outputs at a more aggregate level (e.g., the division, department, or wing). Research evaluating organizational interventions and change has typically focused on organizational levels, in and of themselves, without an analysis of the linkages between levels or processes and the interdependencies amongst outputs from one level or process as inputs to other levels and processes. Moreover, these evaluations have, for the most part, failed to quantitatively examine the interaction among the levels or among the key elements within each level. With respect to organizational assessment and process change-related activities, these interdependencies must be clearly defined and quantified if benefits from change are to be examined systematically (Cascio, 1996; Van Maanen, 1979). Furthermore, researchers (e.g., Bennett, Ruck, & Huffcutt, 1992; and Bennett, Yadrick, & Perrin, 1996) have argued that these linkages might play a critical role in moderating the ability to detect change at subsequent levels. This paper describes a preliminary taxonomy for the assessment of change in organizational restructuring efforts. The need for cross-level metrics of success and the potential use of linkages and interdependencies for organizational and process diagnosis and prescription will be described and discussed.

Introduction

Recently, Cascio (1995) described the major issues and areas for future research in a changing world of work. Many of the areas he discussed are relevant to our examination of the assessment of change in organizations. One of the most interesting items discussed is the fundamental disconnect between the potential benefits of organizational development and reengineering activities and documented organizational change (Cascio, 1995). One of the major issues in quantifying change is to understand the complex interplay of levels within the organization. In fact, it will be virtually impossible to demonstrate the benefits of change unless the impact of individual levels are addressed as part of the change activity and as part of the evaluation of impact. Tichy (1994) noted that competitive organizations must be able to master change at all levels. This paper will describe and discuss some of the most relevant levels and areas of focus that must be considered in any development, reengineering, or change activity. Given the potential benefits to be gained from systematic change both inside and outside the DoD, examining the key issues and developing methods for estimating potential change and actual benefit from these activities is critical to future competitive advantage in the workplace.

Organizational Development Theory and Practice

Organizational development is both a philosophy and a process whereby an organization maintains and enhances its capability to survive in the marketplace. In terms of a philosophy, organizational development requires that the organization be flexible and open to innovation and change. In terms of a process, organizational development is a continual, systematic diagnosis of the current and future state of the organization (Porras & Harkness, 1985). The goals of the process are to a) identify areas for potential change; b) develop prescriptions for change; c) develop interventions to implement change; d) evaluate the effectiveness of the change (from both formal and informal levels); and e) feed outcomes back to the diagnostic activities. The process requires that internal and external criteria be developed to evaluate the effectiveness of the change (see Bennett, Ruck, Mitchell, & Vaughan, 1991).

Organizations adopt numerous strategies to maintain and enhance their economic and productive status in the marketplace. These strategies can include the following: a) Increase the efficiency and effectiveness of recruitment, selection, classification, and placement systems; b) Implement quality circles and participative management approaches to identify areas of potential change; c) Develop comprehensive training programs for employees and managers at all levels of the organization; and d) Develop evaluation methods to assess the

effectiveness of training (Cascio, 1987). The strategies listed are only a few of those which are available to organizations. The purpose here is to highlight the wide variety of options open to organizational planners.

Given that many recent change activities have not met with great success (Cascio, 1995), what are the most important areas for additional research? The two areas identified by Cascio (1995) are planning for change, guided by theory, and implementing change, based on practice. We would propose to add a third area to the list: evaluating the impact of change, based on both change and measurement theory and practice. Unfortunately the theory of organizations and the process of change and development has not kept pace with the rapidly changing nature of work (Porras & Robertson, 1992). What may be needed are better models of organizations that not only depict the structure of the organization, but also model the variety of functions and provide a mechanism whereby processes and the interaction amongst organizational levels can be identified and quantified (see Woodman, 1989).

Although a number of analytic tools have been developed to identify targets of opportunity for change, the tools are not able to systematically assess the process of change and to evaluate impact of change in terms that are relevant to the organization. In fact, some researchers (see Bennett, Yadrick, & Perrin, 1996) have argued that what is needed are simulation models of organizations that can be used to not only identify target processes and levels for change, but that can also be used a-priori to establish estimates of likely impact and identify moderators of the impact of change.

A Simple Organizational Structure

To adequately assess the impact of organizational process change, a comprehensive taxonomy of task and human individual difference variables is required. This will involve somewhat separate taxonomies of task characteristics and individual differences, with clear connections between variables in the task and individual differences taxonomies. A great deal of R&D has already been done concerning taxonomies in these two areas (Fleishman & Quaintance, 1984). However, for the most part, researchers have focused primarily on one of the areas (people or tasks), with relatively little emphasis on the other area. As a result, people and task variable taxonomies have not been well-connected. Assessment of change requires task and individual differences taxonomies with clear relationships. Further, research has not attempted to examine people and task variables within the broader context of work or organizational change. In fact, the impact of change and restructuring on individual attitudes and involvement in the organization as well as the impact of work team and unit cohesion, is potentially so pervasive, that it must be addressed. However, in looking over organizational change approaches and methods, the individual worker is, in many cases, not considered in the process. In fact, it would appear that individuals are not even part of the organization. Instead the organization is viewed as an entity in and of itself and as such can be changed and restructured at will.

As previously stated an additional area of research involves modeling key events and processes at multiple organizational levels. Figure 1 illustrates a simple organization and identifies some of the linkages and dynamics that may serve as moderator variables across levels. The fundamental problem is that empirical relationships among variables at different levels tend to be weak. As a result, it is difficult to relate lower-level variables (e.g., individual task performance) to organizational outcomes of interest. Yet, for change planning, management, and evaluation to be possible, organizational impacts of various interventions must be made visible. One approach to solving this problem involves including the important moderating variables operating at each organizational level in the theory. These variables can include variables such as sociopolitical variables that are exogenous to an organization, but can greatly impact on organizational performance.

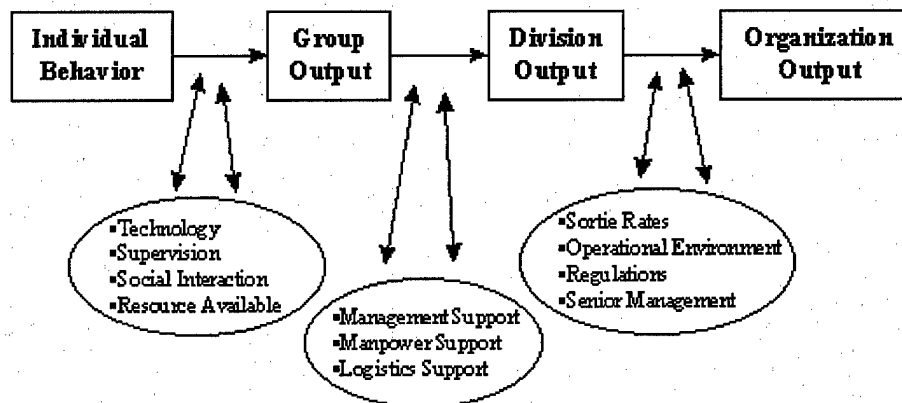


Figure 1. Simple Organizational Structure

Developing a Taxonomy of Key Variables and Processes

To adequately address organizational change and to assess the impact of change, any taxonomy must have several key characteristics. First, it should account for an individual person's performance on groups of tasks that compose jobs and/or processes. This will involve both task, process, and people characteristics. It will also involve those human resources activities that lead to performance, principally training. Secondly, a change taxonomy should also account for organizational performance. This will involve relating variables operating at multiple levels of abstraction, including individual performance, for many people and tasks, and a variety of work group and organizational variables. Finally, these two submodels -- the individual-task performance model and the organization performance model -- should be interrelated. A taxonomy should also incorporate direct impacts of task and people characteristics on organizational variables and should also reflect impacts of organizational variables, such as climate and personnel policies, on individual and workgroup performance. The two submodels should be completely separable.

Figure 2 presents a preliminary taxonomy that meets these requirements. This is in no way a completely-specified taxonomy. It is not even a complete catalogue of variables that should be included. It does, however, indicate the major kinds of variables to include, as well as the major relationships that should be reflected in new change models. Figure 2 illustrates impacts of various kinds of task characteristics and individual difference variables on individual task performance, as well as the selection and training processes that precede such task performance. These variables are likely to impact on work group performance as well; this feature is also included.

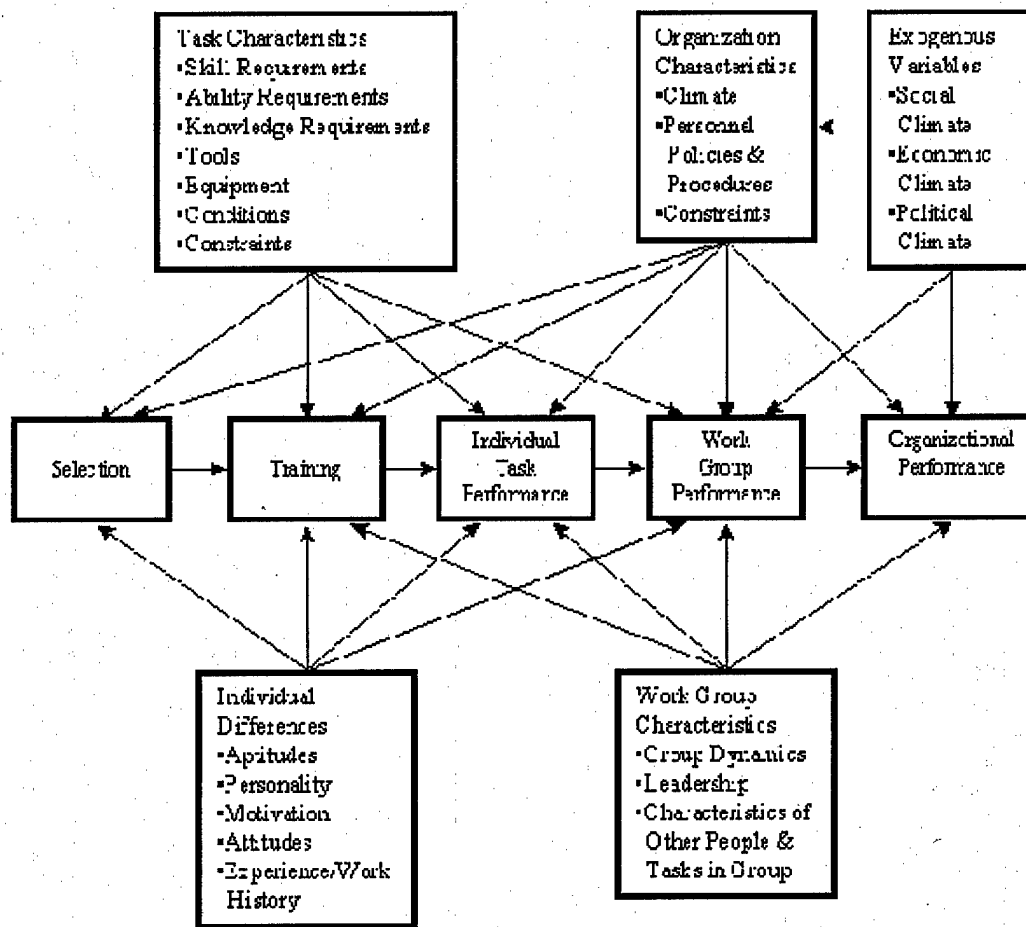


Figure 2. A Preliminary Taxonomy of Organizational Process Change

As mentioned above, Figure 2 only illustrates a preliminary list of key variables and processes. It is not a fully elaborated schema. The two figures taken together attempt to illustrate the complexity of assessing the impact of organizational change and development in dynamic organizations. From these figures, it should be possible to develop a new model of organizational process and change.

Conclusions

Based on recent discussions regarding the impact of organizational change and restructuring, there are a number of issues that need to be addressed in future research. This paper outlined some of the key issues and proposed an initial taxonomy of variables to be examined in systematic evaluations of change. We believe that a fully-elaborated taxonomy inclusive of the variables and levels outlined in this paper is critical to demonstrating the impact of change on organizations. Such a taxonomy provides a needed framework for integrated organizational intervention and change planning and management. Such a taxonomy can be used to drive organizational research and development in a number of critical areas and provides a means of systematically extrapolating individual- and task-level data, as well as other data describing a current organizational situation, to new and different circumstances of interest to process change planners. Additional research and development is required to examine specific interrelationships and the impact of change on individuals and on organizations. This work will involve evolving theory and practice in key areas and linking these into the taxonomy.

References

Bennett, W., Jr., Ruck, H.W., Mitchell, J.L., & Vaughan, D.S. (1991). Training and development in military organizations: Implications for diagnosis and needs assessment. *Proceedings of the 33d Annual Conference of the International Military Testing Association* (pp.670-675), San Antonio, TX.

Bennett, W., Jr., Yadrick, R.M., & Perrin, B. (1996). Estimating the utility of organizational change using probability-based simulations. *Proceedings of the 15th Applied Behavioral Sciences Symposium* (pp. 273-278), Colorado Springs, CO; USAF Academy Department of Behavioral Sciences and Leadership.

Cascio, W.F. (1995). Whither industrial and organizational psychology in a changing world of work? *American Psychologist*, 50, 928-939.

Porras, J.I., & Harkness, J. (1985). Managing planned change: A stream approach. In W. Bennis, R. Tannenbaum, N. Margulies, & F. Massarik (Eds.), *Human systems development* (pp. 224-245). San Francisco: Jossey-Bass.

Porras, J.I., & Robertson, P.J. (1992). Organizational development: Theory, practice, and research. In M.D. Dunnette & L.M. Hough (Eds.), *Handbook of industrial and organizational psychology* (2nd ed., Vol. 3, pp. 719-822). Palo Alto: Consulting Psychologists Press.

Tichy, N. (1994, May). The future of workplace learning and performance. *Training and Development*, S46.

Van Maanen, J. (Ed.). (1979). Qualitative methodology [Special Issue]. *Administrative Science Quarterly*, 24.

Woodman, R.W. (1989). Organizational change and development: New arenas for inquiry and action. *Journal of Management*, 15, 205-228.



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